

- Q. Does the contamination at Allied Landfill impact the city of Kalamazoo Well Field?
- A. No. EPA has studied the groundwater at Allied Landfill and the groundwater flow patterns in the area including the city well field and Allied Landfill. In the horizontal plane, groundwater at Allied Landfill flows east to Portage Creek and not Northwest to the city well-field. In the vertical plane, groundwater flows up from the deeper aquifer, in which the well-field is located, to the shallow aquifer where Allied Landfill is located. That pathway is blocked by an aquitard, preventing connection between the two aquifers.
- Q. How has EPA cleaned up other landfills that are similar to Allied Landfill?
- A. King Highway Landfill, 12th Street Landfill and the Willow Boulevard/A-Site Landfill are PCB contaminated paper-waste landfills that are also parts of the larger Kalamazoo River Site. The cleanup remedy for all three of those landfills has been: consolidation, capping and long-term monitoring. There have only been X detections of PCBs in groundwater samples from King Highway (X years) Landfill and 12th Street Landfill (X years), none of those detections have been above risk-based criteria. EPA has used consolidation, capping and monitoring as a cleanup method for dozens of landfills in Region 5. The types of engineered structures put in place as a part of the cleanup were responsive to the particular risks posed by the sites.
- Q. The consolidation and capping alternatives in the Feasibility Study do not include a bottom liner. Is it legal for a TSCA landfill to not have a bottom liner? Is it protective?
- A. It is not a legal requirement for all TSCA landfills to have a bottom liner. EPA regulations allow for a risk-based approach for closure of existing landfills which TSCA waste. Based upon the conditions at Allied Landfill, a bottom liner is not necessary for a remedy to be protective. The purpose of a bottom liner at a landfill is to prevent the risk of groundwater contamination by contaminants in a landfill. The groundwater data collected at Allied Landfill, show that PCBs and other site-related contamination are not leaching into groundwater. As the contamination at Allied Landfill does not impact groundwater, a bottom liner is not necessary.
- Q. Will groundwater should be diverted from bottom contact so there will be no treatment costs?
- A. It is not necessary to divert water to prevent contact between the waste and groundwater, because PCBs and other site contaminants are not leaching into groundwater. This should be expected because, PCBs do not readily dissolve into groundwater and have a high affinity for organic material. At Allied Landfill, the PCBs are bound up to the clay and wood fiber in the landfill and are only infrequently detected in groundwater. Direct contact can be prevented. Real risk is of massive erosion into Portage Creek. 45 acres vegetated. Gas vents prevent too much access, but we can look into getting more of it accessible.
- Q. Could the cost of a remedy at Allied Landfill impact the available funds for the river?
- A. It is possible that EPA might draw on site-wide funds (which could be used to fund cleanup on the Kalamazoo River) to pay for a cleanup at Allied Landfill.

- Q. Who will make sure that the landfill is protective long-term?
- A. It is EPA's responsibility to monitor the remedy and ensure that it is protective, both short-term and long-term. If EPA selects a waste-in-place remedy, there would regular monitoring of the landfill cover and of the landfill groundwater.
- Q. Are there any alternative technologies that could be used to cleanup Allied Landfill?
- A. EPA has conducted a comprehensive study of alternative technologies, ranging from bio-remediation to incineration, and concluded that none of them provide a viable option at Allied Landfill. EPA's evaluation of the technologies can be found in Section 3 of the Allied Landfill Feasibility Study and a supplemental memorandum. Both of these documents can be found on EPA's webpage for Allied Landfill: <http://www.epa.gov/region5/cleanup/alliedpaper/index.html>
- Q. Would this new cleanup alternative that allows for site-wide redevelopment be protective?
- A. Yes. EPA can only select among cleanup alternatives that are protective.

What cleanup standards for parts of the site?

- Q. Would the addition of a new redevelopment alternative in the Feasibility Study mean that the total removal alternative would be taken out of the Feasibility Study?
- A. No. EPA will not be eliminating the total removal alternative from the Feasibility Study and will carry it forward through the remedy selection process.

How does money factor into it?

- Q. What are the costs associated with a remedy that keeps the waste in place?
- A. Remedies that leave waste in place require long-term maintenance to ensure that the remedy continues to be protective over time. For Allied Landfill, EPA has estimated that the cost to maintain consolidation, capping and long-term monitoring remedy to be 5 million dollars.